Table S1.
Brain regions showing a stronger response to human than spotlight conditions (human > spotlight)

Region	Number of voxels	*T*	Montreal Neurological Institute co-ordinates		
			x	y	z
Right middle and superior temporal gyri extending into inferior parietal lobule	**1755**	**9.92**	**60** **51** **45**	**-46** **-40** **-58**	**7** **10** **34**
Bilateral medial inferior occipital	188	7.63	6 -6	-97 -103	16 10
Right inferior frontal gyrus	**1128**	**7.17**	**51** **48** **42**	**17** **8** **14**	**16** **49** **19**
Left inferior occipital gyrus	33	6.65	-27 -39 -45	-97 -91 -85	-11 -8 -5
Amygdala	**283**	**6.34**	**21** **21** **24**	**-4** **-13** **-25**	**-26** **-17** **-5**
Left middle and superior temporal gyri	**634**	**6.17**	**-63** **-51** **-54**	**-49** **-49** **-73**	**7** **7** **10**
Left inferior temporal/fusiform gyrus	100	5.11	-45 -39 -36	-55 -76 -70	-23 -29 -35
Right lateral ortitofrontal gyrus	37	4.11	36 42 33	41 47 29	-14 -14 -11
Right lateral prefrontal cortex	32	3.95	36	59	1
Left hippocampus	111	3.87	-27 -21 -24	-19 -7 -13	-11 -23 -17
Left inferior frontal gyrus/sulcus	75	3.85	-39 -42	2 17	40 43
Left lateral prefrontal cortex	31	3.69	-48 -48	38 32	-5 -14
Superior frontal gyrus	35	3.60	3 -6	29 26	55 49
Inferior/middle frontal gyrus	20	3.42	-48	17	22
Putamen	29	3.41	21 21 21	5 -1 8	13 4 7

Note: Only regions surviving a whole-brain voxel-level threshold of $p<0.005$ and 10 voxels are reported. Subpeaks more than 8 mm from the main peak in each cluster are listed.
Bold indicates regions that survive the whole-brain cluster-corrected (FWE) threshold at $p<0.05$.

Table S2.

Brain regions showing a stronger response to spotlight than human conditions (spotlight > human)

Region	Number of voxels	*T*	Montreal Neurological Institute co-ordinates		
			x	y	z
Left medial fusiform gyrus	**4534**	**10.15**	**-27**	**-79**	**-17**
extending into right medial fusiform			**24**	**-67**	**-17**
gyrus			**15**	**-76**	**-17**
Left superior parietal lobule	**266**	**6.2**	**-24**	**-49**	**73**
			-33	**-55**	**64**
			-18	**-58**	**70**
Left postcentral gyrus (somatosensory	50	3.79	-60	-19	22
cortex)			-54	-28	37
			-63	-25	34
Right superior parietal lobule	10	3.04	27	-49	73

Note: Only regions surviving a whole-brain voxel-level threshold of $p<0.005$ and 10 voxels are reported. Subpeaks more than 8 mm from the main peak in each cluster are listed. Bold indicates regions that survive the whole-brain cluster-corrected (FWE) threshold at $p<0.05$.

Figure S1.

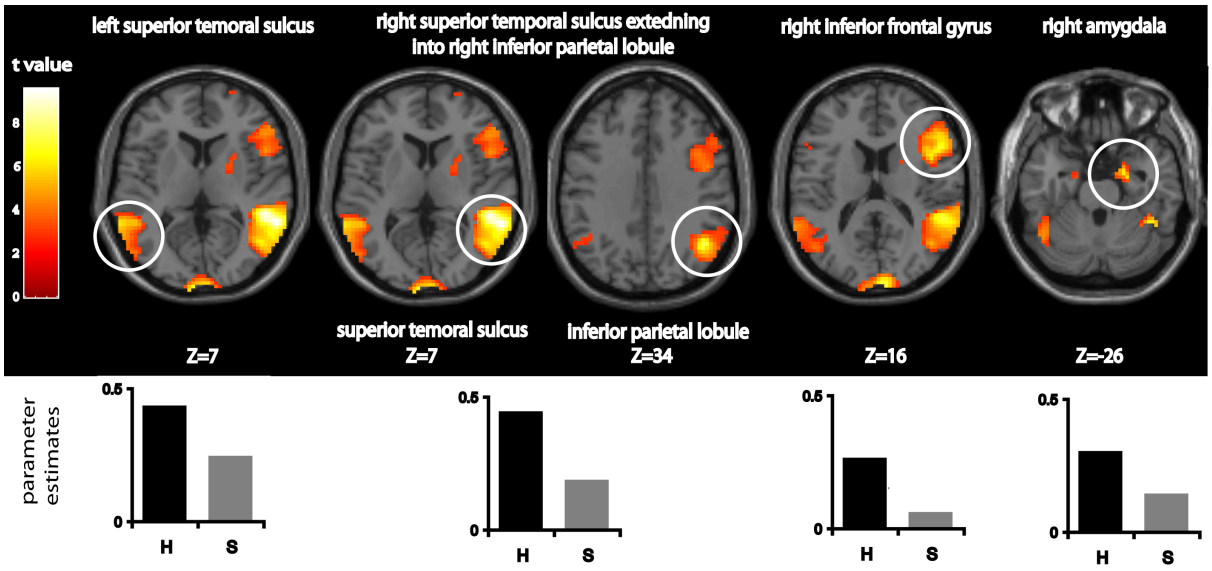


Figure S1. Brain regions showing a greater response to human than spotlight movies. Significantly greater activity was observed for human (black bars) compared to spotlight videos (grey bars) in bilateral superior temporal sulcus, right inferior parietal lobule, right inferior frontal gyrus and right amygdala. Cluster-average parameter estimates (SPM betas) are plotted for each cluster (abbreviations are: H = human; S = spotlight). In clusters with anatomically distinct subpeaks, each subpeak is visualised and circled.

Figure S2.

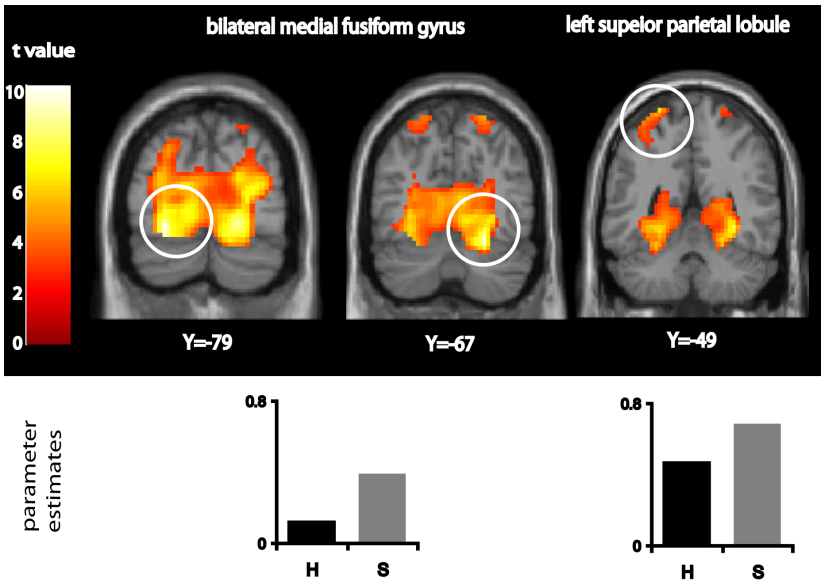


Figure S2. Brain regions showing a greater response to spotlight than human movies. Significantly greater activity was observed for spotlight (grey bars) compared to human movies (black bars) in bilateral medial fusiform gyrus and left superior parietal lobule. Cluster-average parameter estimates (SPM betas) are plotted for each cluster (abbreviations are: H = human; S = spotlight). In clusters with anatomically distinct subpeaks, each subpeak is visualised and circled.

Figure S3. Behavioural experiment measuring eye movement.

Materials and Methods

Five participants (3 male, mean age 28.6) watched identical stimuli to those shown during fMRI scanning (see Materials and Methods in the main text for details), whilst their eye movements were recorded using a Tobii 1750 infrared recording system. A standard nine point calibration was successfully completed prior to each recording and gaze was sampled at a rate of 50Hz with 1° precision and 0.5° accuracy. There were small differences between the protocol used in this behavioural experiment and that used in the scanner. The gap between videos was 1 s instead of 0.4 s, which was due to constraints of the Tobii eye tracking system. In addition, participants gave their responses to questions verbally instead of making a button press.

We calculated the number of saccades during each movie using a velocity-based algorithm with a threshold of 60 deg/sec. In addition, we calculated the percentage of total data points in the top part of the screen, which corresponded to the neck upwards in the human condition and the bottom of the spotlight's starting position upwards in the spotlight condition.

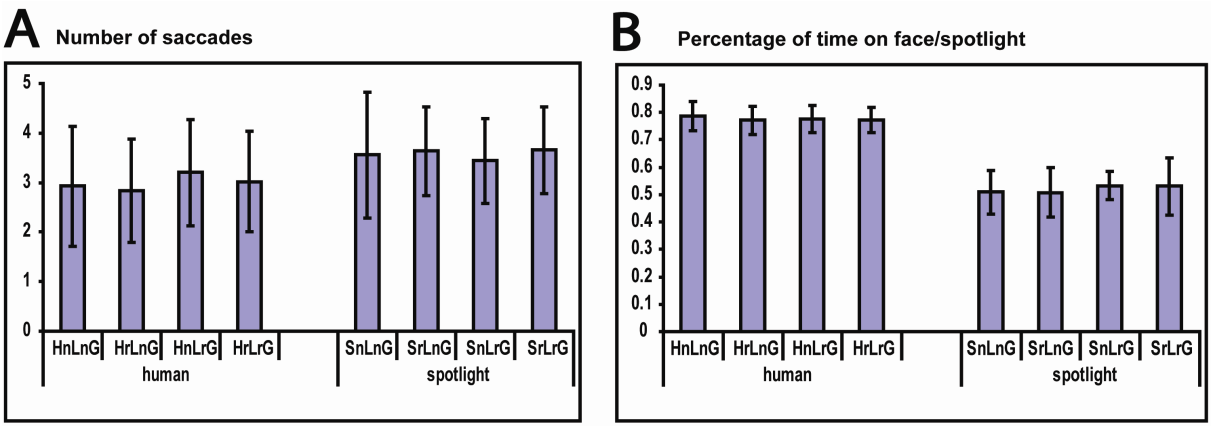
For both dependent measures we performed a 2 (agent: human vs. spotlight) x 2 (object: novel vs. repeated) x 2 (side: novel vs. repeated) repeated measures ANOVA. In addition, due to the main focus of this behavioural experiment being an examination of eye movement in the human condition, we also performed a 2 (object: novel vs. repeated) x 2 (side: novel vs. repeated) repeated measures ANOVA on the human condition only.

Results and Discussion

Analysis of the number of saccades demonstrated a significant main effect of agent $F(1, 4) = 7.82$, $p = 0.049$, with more saccades for the spotlight than human condition (Plot A). There were no main effects of object $F(1, 4) = 0.44$, $p = 0.54$ or side $F(1, 4) = 0.01$, $p = 0.96$ and no interactions (all p's > 0.05). When we examined the human condition separately with a 2 (object: novel vs. repeated) x 2 (side: novel vs. repeated) repeated measures ANOVA, we also found no main effect of object $F(1, 4) = 3.06$, $p = 0.17$ or side $F(1, 4) = 2.24$, $p = 0.21$ and no object*side interaction ($p > 0.05$)

For the percentage of data points in the top part of the screen, the results demonstrated a significant main effect of agent $F(1, 4) = 36.73$, $p = 0.004$, with a greater percentage of data points being recorded on the face (in the human condition) than on the same region of space in spotlight condition (Plot B). There were no main effects of object $F(1, 4) = 0.95$, $p = 0.38$ or side $F(1, 4) = 0.52$, $p = 0.51$ and no interactions (all p's > 0.05).

These findings demonstrate no differences in eye movements between novel and repeated trials in any condition, including gazed-object, gazed-location, highlighted-object and highlighted-location. Hence, these data suggest that the RS for gazed-object effect observed in the fMRI study in posterior intraparietal sulcus (pIPS) is not due to differential eye-movement between novel and repeated gazed-at object trials. Differences in eye-movements were only observed for comparisons between human and spotlight conditions, which we attribute to the presence of a person engaging the focus of attention more than the spotlight.



Abbreviations: H = human; S = spotlight; N = novel; R = repeated; O = object; L = location. Error bars represent standard deviation of the mean.